

AMENDMENTS TO THE CLAIMS

Claim 1 (currently amended): A lens system for reconfiguring the cornea and holding the reconfigured cornea during a laser treatment, said system comprising:

a lens member having an anterior surface and formed with a contact surface opposed to said anterior surface;

a skirt for forming a seal against the exterior surface of the eye, said skirt surrounding said contact surface and projecting outwardly therefrom to define a recessed chamber therebetween, said recessed chamber having an opening[:];

a passageway positioned substantially adjacent to said contact surface, said passageway in fluid communication with said recessed chamber; and

a suction [means]device in fluid communication with said passageway for creating a partial vacuum in said recessed chamber to [draw the cornea into said recessed chamber and] reconfigure the cornea against said contact surface when said skirt [cornea]is placed in contact with [over]said exterior surface of the eye[opening of said skirt].

Claims 2-24 (canceled).

25. (new): A device for reconfiguring the surface of a cornea, said device comprising:

a transparent optical element having a first surface and a second surface;

a skirt adjoining said optical element thereby forming a recessed chamber around said first surface, said recessed chamber having an opening; and

a passageway positioned adjacent to said opening, said passageway in fluid communication with said recessed chamber;

wherein said passageway is adapted for connection in fluid communication with a suction device for creating a partial vacuum in said recessed chamber.

26. (new): A device as recited in claim 25, wherein said first surface is shaped to reconfigure the surface of the cornea.

27. (new): A device as recited in claim 25, wherein said skirt is cylindrical.

28. (new): A device as recited in claim 25, wherein said skirt extends outwardly from said first surface.

29. (new): A device as recited in claim 25, wherein said skirt has a sealing surface extending into said recessed chamber, wherein said sealing surface is formed of a soft, medical grade plastic.

30. (new): A device as recited in claim 25, wherein said first surface is substantially flat.

31. (new): A device as recited in claim 25, wherein said second surface is substantially flat.

32. (new): A device as recited in claim 25, wherein said first surface is curved.

33. (new): A device as recited in claim 25, wherein said second surface is curved.

34. (new): A device as recited in claim 25, wherein said first surface is shaped to introduce less spherical aberration to a laser beam as said laser beam passes into the reconfigured cornea than is introduced into an identical laser beam passing into a cornea that is not reconfigured.

35. (new): A device as recited in claim 25, wherein said second surface and first surface are substantially parallel.

36. (new): A device as recited in claim 25, further comprising an extension connected to said skirt.

37. (new): A device as recited in claim 34, wherein said extension has a sealing surface with a concave curvature.

38. (new): A lens system for reconfiguring a cornea and holding the reconfigured cornea during a laser treatment, said system comprising:

a corneal surface reconfiguring device comprising

a transparent optical element having a first surface and a second surface,

a skirt adjoining said optical element thereby forming a recessed chamber around said first surface, said recessed chamber having an opening,

a passageway in fluid communication with said recessed chamber;

a suction device in fluid communication with said passageway; and

a retainer for mounting said reconfiguring device to a laser system.

39. (new): A lens system as recited in claim 38, wherein said first surface is shaped to reconfigure the surface of the cornea.

40. (new): A lens system as recited in claim 38, wherein said skirt is cylindrical.

41. (new): A lens system as recited in claim 38, wherein said skirt extends outwardly from the first surface and surrounds said first surface.

42. (new): A lens system as recited in claim 38, wherein said skirt has a sealing surface extending into said recessed chamber, wherein said sealing surface is formed of a soft, medical grade plastic.

43. (new): A lens system as recited in claim 38, wherein said first surface is substantially flat.

44. (new): A lens system as recited in claim 38, wherein said second surface is substantially flat.

45. (new): A lens system as recited in claim 38, wherein said first surface is curved.

46. (new): A lens system as recited in claim 38, wherein said second surface is curved.

47. (new): A lens system as recited in claim 38, wherein said passageway is positioned substantially adjacent to said first surface.

48. (new): A lens system as recited in claim 38, wherein said suction device generates suction thereby forming a partial vacuum in said recessed chamber.

49. (new): A lens system as recited in claim 38, wherein said first surface is shaped to introduce less spherical aberration to said laser beam as said laser beam passes into the reconfigured cornea than is introduced into an identical laser beam passing into a cornea that is not reconfigured.

50. (new): A lens system as recited in claim 38, further comprising:

a laser source for producing a laser beam, said laser source positioned to pass said laser beam through said optical element.

51. (new): A lens system as recited in claim 38, wherein said second surface and first surface are substantially parallel.

52. (new): A lens system as recited in claim 38, further comprising a skirt extension connected to said skirt.

53. (new): A lens system as recited in claim 52, wherein said skirt extension has a sealing surface with a concave curvature.

54. (new): A lens system as recited in claim 38, further comprising a tube connecting said suction device and said passageway in fluid communication.

55. (new): A lens system as recited in claim 38, wherein said suction device is a syringe.

56. (new): A lens system as recited in claim 38, wherein said suction device is a vacuum pump.